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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/533,083	04/28/2005	Thuy-Phuong Le	2002P03505WOUS	2307

28524 7590 11/03/2009

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ART UNIT	PAPER NUMBER
2446	

MAIL DATE	DELIVERY MODE
11/03/2009	PAPER

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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/533,083
Filing Date: April 28, 2005
Appellant(s): LE ET AL.

Janet D. Hood, Reg. No. 61,142
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed June 5, 2009 appealing from the Office action mailed January 8, 2009.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

U.S. 2001/0034759 Chiles et al. 10-2001

SGI "IRIX Admin: Networking and Mail" Techpubs Library, Chapter 3, document number: 007-2860-001 (Mar 18, 1996), pp. 1-32

Microsoft Technet "Microsoft Privacy Protected Network Access: Virtual Private Networking and Intranet Security" (May 13, 1999). pp. 1-9

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 8, 10-11, 13, 15, and 20-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chiles et al. (U.S. 2001/0034759) in view of SGI (Techpubs Library "IRIX Admin: Networking and Mail").

With respect to claim 8, A method for interchanging data between an external device (Chiles et al. Figure 4 "Host System 430") and applications installed on a plurality of network elements (Chiles et al. [0011] "client device having computer software that enables the client devices... to communicate with the host system") of a packet-switching network (inherently implied by the use of TCP/IP protocol by the client device [0060] in Chiles et al.) using a tunnel connection (Chiles et al. Abstract "communication tunnel" and [0058] "Layer Two Tunneling Protocol"), wherein each network element is connected to a network node device (Chiles et al. Abstract "The client devices are typically connected to the home gateway device"), and wherein the network node device is involved in the tunnel connection (Chiles et al. [0063] "The home gateway device uses L2TP to tunnel the PPP traffic from each client PPPoE session to the host system"), the method comprising:

assigning to the network node device a globally unique address (Chiles et al. [0087] Lines 17-21 and [0088] Lines 6-8 "IP address" from the host system) so that the network node device forms a network-end terminal point of the tunnel

connection when a plurality of network elements jointly use the tunnel connection, wherein all data are routed through the network node device (Chiles [0070] Lines 13-16 and [0063] Lines 4-10) and wherein the network node device is a terminal point of the tunnel connection (a NAT enabled router of Chiles is known in the art to be a terminal point of the tunnel connection in the views of the external networks).

If the network element requires a global address for executing an application, the Chiles reference discloses how the network element is assigned a global address (Chiles et al. [0096] Lines 12-16). However, where the Chiles reference does not teach, the SGI reference teaches a method of assigning to a network element a globally unique address so that the network element forms a network-end terminal point of the tunnel connection when the network element requires a global address for executing an application, and when the tunnel connection is exclusively used by the network element (See SGI "Setting Up Tunnels to Support Multicast Packets" and Figure 3-2), and wherein the network node device is a data-routing entity of the tunnel connection (See SGI Figure 3-2 "Router 1" and "Router 2").

It would have been obvious to the person having ordinary skill in the art, at the time the invention was made, to have combined the teachings of SGI reference together in a device taught by Chiles reference in order to be able to support Legacy network hardware systems as well as newer network devices.

With respect to claim 10, the Chiles and SGI references teach the limitations of claim 8 in which claim 10 is depending upon as noted above. The Chiles reference

further teaches, the network elements are computers (Chiles et al. Figure 4 "Window PC" 405a) and the external device (Chiles et al. Figure 4 "Host System" 430) is an Internet service provider (Chiles et al. [0007] Lines 5-6) connected by a DSL modem (Chiles et al. Figure 4 "xDSL Modem" 420d).

With respect to claim 11, the Chiles reference further teaches the computers as claimed in claim 10 are Personal Computers (Chiles et al. Figure 4 "Windows PC" 405a).

With respect to claim 13, in addition to limitations of claim 8, in which claim 13 is depending upon, which are taught by the Chiles and SGI references, the Chiles reference teaches the network elements have associated local addresses which are unique only in the packet-switching network (Chiles [0085] Lines 1-3 and [0086] Lines 1-4).

With respect to claim 15, the Chiles and SGI references teach limitations as claimed in claim 10, in which claim 15 depends on. In addition, the Chiles reference further teaches the network elements have associated local addresses which are unique only in the packet-switching network (Chiles Figure 12 "LAN Address", [0085] Lines 1-3, and [0086] Lines 1-4).

With respect to claims 20 and 21, the combination of Chiles and SGI disclosures teach the network node device that is a terminal point or a data-routing entity of the tunnel connection as noted above. Therefore, it is inherent the device resulted from this combination is capable of performing as "a terminal point" or "a data-routing entity" of the tunnel connection either "alternately" or "simultaneously."

With respect to claims 22, the combination of Chiles and SGI teachings obviously implies that the network node device is a terminal point or a data-routing entity of a plurality of tunnel connections: tunnel connections that terminate at the network node device as taught by the Chiles reference and tunnel connections that terminate at the network elements as taught by the SGI reference.

With respect to claim 23, the Chiles reference discloses a network node device (Chiles et al. Figure 4 "Home Gateway Device" 415) involved in interchanging data using at least one terminal connection (Chiles et al. Abstract "communication tunnel" Lines 11-14) between an external device (Chiles et al. Figure 4 "Host System" 430) and applications installed on a plurality of network elements (Chiles et al. [0011] Lines 1-5) of a packet-switching network (inherently implied by the used of TCP/IP [0060] in Chiles reference), wherein

each network element is connected to a network node device (Chiles et al. Figure 4 client devices 405), wherein

a network-end terminal point of the tunnel connection has a uniquely allocated global address (Chiles et al. [0089] Lines 1-4, [0087] Lines 17-21, and [0088] Lines 5-7), wherein

the network node device forms the network-end terminal point of the tunnel connection (Chiles et al. [0096] Lines 14-16) if a plurality of network elements jointly use the terminal connection (Chiles et al. [0063] Lines 4-10).

If a network element requires a global address for executing an application, Chiles reference does not disclose of the network element forms the

network-end terminal point of the tunnel connection when the tunnel connection is exclusively used by the network element, and all data are routed through the network node device. Rather, Chiles teaches the network element that sets up sessions to communicate through the tunnel connection an all data are routed through the network node device (Chiles et al. [0089]).

However, the SGI document discloses the network element that forms the network-end terminal point of the tunnel connection, wherein the tunnel connection is configured to be exclusively used by the network element (SGI "Setting Up Tunnels to Support Multicast Packets" and Figure 3-2).

For the same reason as noted above, it would have been obvious to the person having ordinary skill in the art, at the time the invention was made, to have combined the teachings of SGI reference together in a device taught by Chiles reference in order to be able to support Legacy network hardware systems as well as newer network device.

Claims 9, 12, 14, and 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chiles et al. (U.S. 2001/0034759) in view of SGI (Techpubs Library "IRIX Admin: Networking and Mail"), further in view of Microsoft TechNet ("Microsoft Privacy Protected Network Access: Virtual Private Networking and Intranet Security").

Regarding claim 9, the Chiles and SGI references teach the limitations of claim 8, in which claim 9 is depending upon. In particular, the Chiles reference teaches the tunnel connection is a connection which operates on the basis of the L2TP tunneling protocol which transmits the data in a tunneled connection (Chiles et al. [0063] Lines 4-

10), instead of a PPTP tunneling protocol as cited in claim 9. However the Microsoft document discloses of L2TP tunneling protocol as a combination of PPTP and L2F protocols (Microsoft Page 2 "Layer 2 Tunneling Protocol (L2TP)"). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have substituted PPTP protocol in place of L2TP protocol in order to provide backward compatibility for older network elements since PPTP was first delivered in 1996, 2 years before the availability of L2TP (See Microsoft "PPTP Design Goals and Overview" page 3). Furthermore, Microsoft reference teaches that PPTP tunneling protocol is simple and inexpensive to set up, and thus will continue to be a preferred choice for a certain group of customers (See Microsoft "PPTP" page 5-6)

Regarding claim 12, the Chiles, SGI, and Microsoft references teach all the limitations of claim 9 in which claim 12 depends on. Furthermore, the Chiles reference teaches the network elements are computers (Chiles et al. Figure 4 "Window PC" 405a) and the external device (Chiles et al. Figure 4 "Host System" 430) is an Internet service provider (Chiles et al. [0007] Lines 5-6) connected by a DSL modem (Chiles et al. Figure 4 "xDSL Modem" 420d).

Regarding claim 14, the Chiles, SGI, and Microsoft references teach all the limitations of claim 9 in which claim 14 depends on. In addition, the Chiles reference teaches the network elements have associated local addresses which are unique only in the packet-switching network (Chiles Figure 12 "LAN Address", [0085] Lines 1-3, and [0086] Lines 1-4).

Regarding claim 17, the Chiles, SGI, and Microsoft references teach all the limitations of claim 9 in which claim 17 depends on. In addition, the Chiles reference teaches the network node device is a router (Chiles et al. "Home Gateway Device") which has an entity for setting up and operating a tunnel connection (Chiles et al. Figure 13 "L2TP Concentrator" 1319). However, the Chiles reference uses L2TP tunnel connection instead of PPTP tunnel connection as used by the claimed invention. For the same reasons taught by the Microsoft document as noted above, it would have been obvious to one of ordinary skill in the art at the time of the invention to set up a PPTP tunnel connection using the PPTP tunneling protocol instead of L2TP tunneling protocol.

Regarding claim 18, the Chiles, SGI, and Microsoft references teach all the limitations of claim 10, in which claim 18 depends on. Furthermore, the Chiles reference teaches the network node device is a router which has an entity for setting up and operating a tunnel connection (Chiles et al. "Home Gateway Device" functions as a router and Figure 13 "L2TP Concentrator" 1319). However, the Chiles reference uses L2TP protocol instead of PPTP protocol. For the same reasons taught by the Microsoft document as noted above, it would have been obvious to one of ordinary skill in the art at the time of the invention to set up a PPTP tunnel connection using the PPTP tunneling protocol instead of L2TP tunneling protocol.

Regarding claims 16 and 19, the Chiles, SGI, and Microsoft references teach all the limitations of claims 8 and 13 in which claims 16 and 19 depend on, respectively. Furthermore, the Chiles reference teaches the network node device is a router which

has an entity for setting up and operating a tunnel connection (Chiles et al. "Home Gateway Device" functions as a router and Figure 13 "L2TP Concentrator" 1319). However, the Chiles reference uses L2TP protocol instead of PPTP protocol. For the same reasons taught by the Microsoft reference as noted above, it would have been obvious to one of ordinary skill in the art at the time of the invention to set up a PPTP tunnel connection using the PPTP tunneling protocol instead of L2TP tunneling protocol.

(10) Response to Argument

The appellant argues that the cited references lack teaching of all the claimed limitations and the motivation needed to combine the Chiles and SGI references does not exist in the prior art, therefore the combination was made in view of benefits disclosed by appellant's invention.

The examiner summarizes the various points raised by the appellant and addresses replies individually.

1) On pages 8-9 and 11-12, appellant argues that the SGI reference lacks disclosure of a tunnel connection being exclusively used by only one network element in each of the network and that the reference does not show that the router is involved in the tunnel connection. The appellant argues that the SGI reference does not appear to disclose "element b" as was cited to support the rejection of claim 8. The appellant further argues that the SGI reference concerns multicast transmission and therefore does not precludes other network elements from jointly using the same tunnel connection.

2) On pages 8 and 12, appellant argues that "while arguing that an exclusive tunnel connection exists between hosts on NET A and NET B, the rejection cannot also argue that these same routers perform no other transmission while a tunnel exists between the two hosts."

3) On pages 9 and 13, appellant argues that there is no prior art of record to support a Legacy System that the examiner used as a motivation to combine Chiles and SGI references in the rejections.

The examiner respectfully submits:

Regarding argument 1), examiner maintains the rejections because, though figure 3.2 of the SGI reference is a simplified illustration, the instructions to create the tunnel that follow figure 3.2 recites that systems on Net A and Net C are selected for the sending and receiving ends of the tunnel, hence, the tunnel is exclusively used by the selected systems.

Furthermore, figure 3.2 of the SGI reference clearly shows router 2 as a physical gateway to network Net A and router 1 as a physical gateway to network Net C. To emphasize that the routers involve in the tunnel connection, examiner would like to point out that SGI create the tunnel in order to accommodate the incompatible routers so that packets can be sent through such routers as shown in the paragraph before figure 3.2 on page 11 of 32. Thus, the SGI reference clearly discloses element b of claim 8.

Additionally, though SGI reference recites multicast packets, it explicitly recites that the tunnel connection is created when the routers do not support

multicast routing and the tunnel connection is created between the Hosts selected for the sending and receiving end of the tunnel (see SGI, page 11 and 12, before and after figure 3.2). Since SGI mentions routers that do not support multicast and packets are sent to the Host selected as receiving end, therefore the tunnel as disclosed by SGI is exclusively used by the selected sending and receiving end of the tunnel.

Regarding argument 2), examiner maintains the rejections because claims 8 and 23 recite "the tunnel connection is exclusively used", therefore, clearly, it is the tunnel connection which is required to be **exclusively used** and not the network node device. Moreover, tunnel connection, as is known in the art, does not physically lock up routers.

Regarding argument 3), examiner maintains the rejections because it has always been the examiner's position that a Legacy system is construed as a specific species of apparatus. A Legacy system was intended to mean an incompatible system which may be present in any network and is known in the art to require its own address and its own tunnel connection, the connection such as disclosed in figure 3.2 of the SGI reference.

The Legacy system is not part of the claim limitation. It is used as an example of an incompatible apparatus used by the examiner with regards to backward compatibility for older devices that would motivated one of ordinary skill in the art to combine tunnel connection as shown in the SGI reference with the one disclosed in Chiles reference.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Y. N./

Examiner, Art Unit 2446

/Jeffrey Pwu/

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